

Serial No. 10/043,140  
July 13, 2004  
Reply to the Office Action dated April 13, 2004  
Page 3 of 12

Claim 2 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 1, wherein the resonance frequency of said second parallel arm resonator is lower than the resonance frequency of each of said at least one first parallel arm resonator.

Claim 3 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 1, further comprising:

a package containing surface acoustic wave elements in which the plurality of parallel arm resonators and the plurality of series arm resonators are provided on said piezoelectric substrate, and a plurality of electrode pads connected to the plurality of series arm resonators or the plurality of parallel arm resonators; and

bonding wires for connecting the plurality of electrode pads and the plurality of series arm resonators or the plurality of parallel arm resonators;

wherein the length of one of said plurality of bonding wires connected to said second parallel arm resonator is ~~substantially equal to or less than~~ the length of another of said plurality of bonding wires connected to said at least one first parallel arm resonator such that the inductor connected to said second parallel arm resonator has an inductance which is ~~substantially equal to or less than~~ the inductance of the inductor connected to said at least one first parallel arm resonator.

Claim 4 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 1, further comprising:

a package containing surface acoustic wave elements in which the plurality of parallel arm resonators and the plurality of series arm resonators are provided on said piezoelectric substrate, and a plurality of electrode pads connected to the plurality of series arm resonators or the plurality of parallel arm resonators; and

bonding wires for connecting the plurality of electrode pads and the plurality of series arm resonators or the plurality of parallel arm resonators;

Serial No. 10/043,140  
July 13, 2004  
Reply to the Office Action dated April 13, 2004  
Page 4 of 12

wherein one end of said second parallel arm resonator is electrically connected to at least two electrode pads among the plurality of electrode pads which are connected to the ground potential such that one of the plurality of inductors which is connected to said second parallel arm resonator has an inductance that is ~~substantially equal to or less than~~ the inductance of another of the plurality of inductors connected to said at least one first parallel arm resonator.

Claim 5 (original): A communication apparatus comprising at least one ladder circuit type surface acoustic wave filter device according to Claim 1, wherein the at least one ladder circuit type surface acoustic wave defines a bandpass filter.

Claim 6 (original): A ladder circuit type surface acoustic wave filter device according to Claim 1, wherein the capacitance  $C_{p2}$  of said second parallel arm resonator is within a range represented by the following expression:

$$C_{p1} \times 2 < C_{p2} < C_{p1} \times 10.$$

Claim 7 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 6, wherein the resonance frequency of said second parallel arm resonator is lower than the resonance frequency of each of said at least one first parallel arm resonator.

Claim 8 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 6, further comprising:

a package containing surface acoustic wave elements in which the plurality of parallel arm resonators and the plurality of series arm resonators are provided on said piezoelectric substrate, and a plurality of electrode pads connected to the plurality of series arm resonators or the plurality of parallel arm resonators; and

bonding wires for connecting the plurality of electrode pads and the plurality of

Serial No. 10/043,140  
July 13, 2004  
Reply to the Office Action dated April 13, 2004  
Page 5 of 12

series arm resonators or the plurality of parallel arm resonators;

wherein the length of one of said plurality of bonding wires connected to said second parallel arm resonator is ~~substantially equal to or less than~~ the length of another of said plurality of bonding wires connected to said at least one first parallel arm resonator such that the inductor connected to said second parallel arm resonator has an inductance which is ~~substantially equal to or less than~~ the inductance of the inductor connected to said at least one first parallel arm resonator.

Claim 9 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 6, further comprising:

a package containing surface acoustic wave elements in which the plurality of parallel arm resonators and the plurality of series arm resonators are provided on said piezoelectric substrate, and a plurality of electrode pads connected to the plurality of series arm resonators or the plurality of parallel arm resonators; and

bonding wires for connecting the plurality of electrode pads and the plurality of series arm resonators or the plurality of parallel arm resonators;

wherein one end of said second parallel arm resonator is electrically connected to at least two electrode pads among the plurality of electrode pads which are connected to the ground potential such that one of the plurality of inductors which is connected to said second parallel arm resonator has an inductance that is ~~substantially equal to or less than~~ the inductance of another of the plurality of inductors connected to said at least one first parallel arm resonator.

Claim 10 (previously presented): A communication apparatus comprising at least one ladder circuit type surface acoustic wave filter device according to Claim 6, wherein the at least one ladder circuit type surface acoustic wave defines a bandpass filter.

Claim 11 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 2, further comprising:

Serial No. 10/043,140  
July 13, 2004  
Reply to the Office Action dated April 13, 2004  
Page 6 of 12

a package containing surface acoustic wave elements in which the plurality of parallel arm resonators and the plurality of series arm resonators are provided on said piezoelectric substrate, and a plurality of electrode pads connected to the plurality of series arm resonators or the plurality of parallel arm resonators; and

bonding wires for connecting the plurality of electrode pads and the plurality of series arm resonators or the plurality of parallel arm resonators;

wherein the length of one of the plurality of bonding wires connected to said second parallel arm resonator is ~~substantially equal to or less than~~ the length of another of the plurality of bonding wires connected to said at least one first parallel arm resonator such that one of the plurality of inductors connected to said second parallel arm resonator has an inductance which is ~~substantially equal to or less than~~ the inductance of another of the plurality of inductors connected to said at least one first parallel arm resonator.

Claim 12 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 2, further comprising:

a package containing surface acoustic wave elements in which the parallel arm resonators and the series arm resonators are provided on said piezoelectric substrate, and a plurality of electrode pads connected to the plurality of series arm resonators or the plurality of parallel arm resonators; and

bonding wires for connecting the plurality of electrode pads and the plurality of series arm resonators or the plurality of parallel arm resonators;

wherein one end of said second parallel arm resonator is electrically connected to at least two electrode pads among the plurality of electrode pads which are connected to the ground potential such that one of the plurality of inductors which is connected to said second parallel arm resonator has an inductance that is ~~substantially equal to or less than~~ the inductance of another of the plurality of inductors connected to said at least one first parallel arm resonator.

Serial No. 10/043,140  
July 13, 2004  
Reply to the Office Action dated April 13, 2004  
Page 7 of 12

Claim 13 (original): A communication apparatus comprising at least one ladder circuit type surface acoustic wave filter device according to Claim 2, wherein the at least one ladder circuit type surface acoustic wave defines a bandpass filter.

Claim 14 (original): A communication apparatus comprising at least one ladder circuit type surface acoustic wave filter device according to Claim 3, wherein the at least one ladder circuit type surface acoustic wave defines a bandpass filter.

Claim 15 (original): A communication apparatus comprising at least one ladder circuit type surface acoustic wave filter device according to Claim 4, wherein the at least one ladder circuit type surface acoustic wave defines a bandpass filter.

Claim 16 (original): A communication apparatus comprising at least one ladder circuit type surface acoustic wave filter device according to Claim 11, wherein the at least one ladder circuit type surface acoustic wave defines a bandpass filter.

Claim 17 (original): A communication apparatus comprising at least one ladder circuit type surface acoustic wave filter device according to Claim 12, wherein the at least one ladder circuit type surface acoustic wave defines a bandpass filter.

Claim 18 (currently amended): A ladder circuit type surface acoustic wave filter device according to Claim 1, wherein said ~~plurality of parallel arm resonators~~ at least one first parallel arm resonator includes two first parallel arm resonators.

Claim 19 (original): A ladder circuit type surface acoustic wave filter device according to Claim 18, wherein said two first parallel arm resonators are disposed at end portions of the surface acoustic wave filter device, and said second parallel arm resonator is disposed between said two first parallel arm resonators.

Serial No. 10/043,140

July 13, 2004

Reply to the Office Action dated April 13, 2004

Page 8 of 12

Claim 20 (original): A ladder circuit type surface acoustic wave filter device according to Claim 1, wherein the ratio of the capacitance  $C_{p2}$  of said second parallel arm resonator to the capacitance  $C_{p1}$  of said first parallel arm resonator is represented by the following expression:

$$C_{p2}/C_{p1} = 5.$$